Annex N to Emergency Support Function #15 External Affairs (April 2018 update)
Radiological

Annex N is a resource toolkit for nuclear and radiological threat information.
Use this toolkit to help prepare for such incidents and to communicate with and educate stakeholders.

The toolkit includes:

- Annex N Purpose and background
- Federal department and agency response authorities (table)
- Radiological Dispersal Device (RDD)
- Improvised Nuclear Device (IND)
- Nuclear bomb (Nation State)
- Case study: possible nuclear attack
- Federal Response
- Case studies: international incident: 2011 Fukushima nuclear crisis
- Responsibilities
- Federal radiation resource toolkit
- CDC infographics and web resources
- Sample nuclear detonation social media messages **new**

1.0 Purpose

This annex details radiological incident communications strategy, actions, and coordination in conjunction with a domestic nuclear/radiological accident, an act of nuclear/radiological terrorism or a nation state sponsored nuclear attack in order to ensure coordination and execution of a unified public outreach effort.

2.0 Background

2.1 DHS is the coordinating agency for the overall Federal Government response to radiological incidents in accordance with HSPD 5 and the NRF. For radiological incidents of lesser severity (those incidents that do not reach the level of an incident requiring a coordinated Federal response), the agency with jurisdictional authority will serve as Federal agency with primary authority.

2.2 Radiological Incidents

Incidents involving radioactive materials may vary in nature. The incident source will dictate which Federal department or agency is the lead coordinator. For example, the NRC is the Federal agency with primary authority for incidents involving commercial nuclear facilities licensed by the NRC. The U.S. Department of Energy (DOE) is the Federal agency with primary authority for incidents at weapons production nuclear facilities and incidents involving the transportation of radioactive materials shipped by or for the DOE. The DOD is the Federal agency with primary authority for nuclear weapons under military

custody, and the National Aeronautics Space Administration (NASA) is the Federal agency with primary authority for the launch of radioactive materials.

Incident Type, Facilities, or Materials Involved	Primary Authority for Federal Response
Nuclear Facilities that are:	
a) Owned or operated by the DOD	a) DOD
b) Owned or operated by the DOE	b) DOE
c) Licensed by the NRC or an NRC Agreement State	c) NRC
d) Not licensed, owned, or operated by a federal agency, an NRC Agreement State, or currently or formerly licensed facilities for which the owner/operator is not financially viable or is otherwise unable to respond	d) EPA
Nuclear Weapons and Components that are:	
e) In the custody of the DOD	e) DOD
f) In the custody of the DOE	f) DOE
Radioactive Materials Being Transported:	
g) By or for the DOD	g) DOD
h) By or for the DOE	h) DOE
i) Containing NRC or NRC Agreement State licensed materials	i) NRC
j) Within certain areas of the coastal zone that are not licensed or owned by a federal agency or an NRC Agreement State	j) USCG
k) Outside certain areas of the coastal zone and not licensed or owned by a federal agency or an NRC Agreement State	k) EPA
Radioactive Materials in Space Vehicles Impacting the United States that are:	
l) Managed by the National Aeronautics and Space Administration (NASA)	l) NASA
m) Managed by the DOD	m) DOD
n) Not managed by the DOD or the NASA and impacting certain areas of the coastal zone	n) USCG
o) Not managed by the DOD or the NASA and not impacting certain areas in the coastal zone	o) EPA
Foreign, Unknown, or Unlicensed Material Involving:	
p) Certain areas of the coastal zone	p) USCG
q) Certain areas outside of the coastal zone	q) EPA
r) Imported contaminated consumer products that are distributed before detection	r) EPA
s) Inadvertently imported radioactive materials	s) CBP
International Incidents	
t) U.S. Government assistance to foreign government response and recovery efforts	t) DOS/USAID
All deliberate attacks involving nuclear/radiological facilities or materials (e.g., Radiological Dispersion Devices, Improvised Nuclear Devices)	DHS
State sponsored Nuclear Attack on the United States (See note)	White House
Law Enforcement and Counterterrorism Operations Related to the Incidents in this Table:	
It is the policy of the United States that until otherwise determined, any weapons of mass destruction incident will be treated as an actual terrorist incident, until the Attorney General, generally acting through the FBI Director, determines otherwise.	
Note: DHS/FEMA may be called upon to lead or provide supplemental operational coordination support for the primary authority during complex incidents.	

Table 1: (Source: Nuclear/Radiological Incident Annex to the Response and Recovery Federal Interagency Operational Plans)

3.0 Radiological Dispersal Device (RDD)

An RDD is a device that disperses radioactive material over an area. A dirty bomb is a type of RDD that uses a conventional explosion to disperse radioactive material over a targeted area. Most of the radioactive particles dispersed by a dirty bomb would likely fall to the ground within a few city blocks or miles of the explosion. RDDs could also include other means of dispersal such as placing a container of radioactive material in a public place or using an airplane to disperse powdered or aerosolized forms of radioactive material.

4.0 Improvised Nuclear Device (IND)

An IND may be constructed from components of a stolen state-built nuclear weapon or from scratch using nuclear material to produce a nuclear explosion. An IND is very different from an RDD which simply disperses radiological material using conventional explosives. An IND creates an explosion that is thousands to millions of times more powerful than any conventional explosive that might be used in a dirty bomb. The resulting radioactive cloud (or plume) from a nuclear bomb contains fine particles of radioactive dust that can blanket large areas (tens to hundreds of square miles) with fallout. The most deadly radioactive particles decay rapidly. People in the downwind area should stay inside for 24-48 hours until this decay occurs. In order to save as many lives as possible, all external and internal messages must contain **"Get inside, Stay inside and Stay tuned."**

5.0 Nuclear Bomb

A State sponsored nuclear attack on the continental U.S. or a U.S. Territory warrants an immediate communications response. Similar to an IND, all external and internal messages must contain **"Get inside, Stay inside and Stay tuned."** If directed by the President a national message can be delivered by the Integrated Public Alert and Warning System (IPAWS). State and local officials may also use their respective Emergency Alert Systems (EAS).

If intelligence or media reports determine an attack is likely but not imminent, Federal, state, local, tribal or territory governments may also decide to provide additional preparedness instructions.

Possible Nuclear Attack Case Study: 2017 July - August North Korea Threat

- Following a series of North Korea missile launches and public exchanges with the U.S., Hawaii's Emergency Management Agency published "Get inside, Stay inside, Stay tuned" preparedness guidance on July 21.
- On August 12, Guam's JIC issued a fact sheet to prepare residents for a possible missile threat.
- Hawaii and Guam leaders conducted numerous public preparedness briefings during this period.

6.0 Federal Response

6.1 Federal Interagency Modeling and Atmospheric Assessment Center (IMAAC)

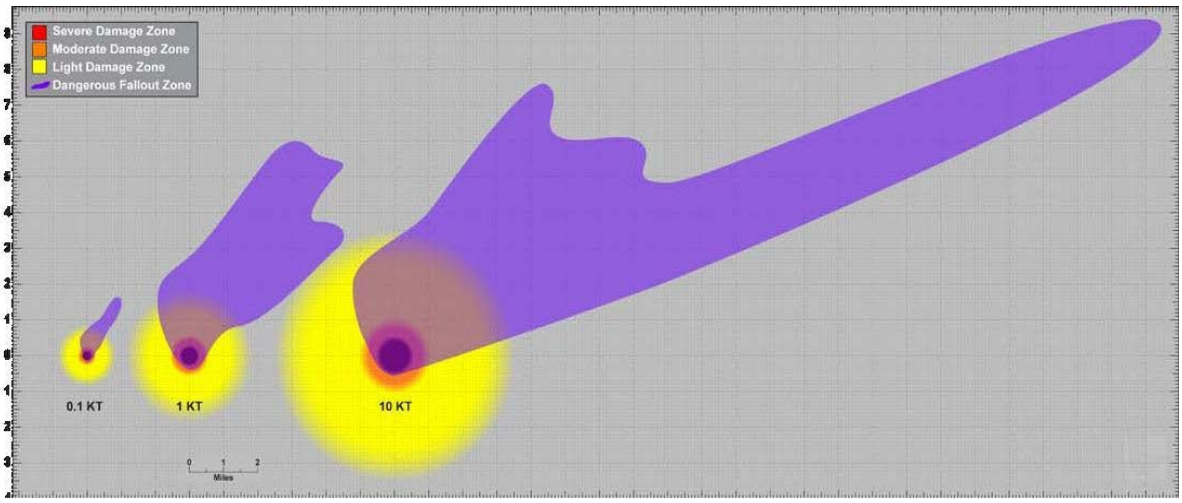
The IMAAC provides a single point for the coordination and dissemination of Federal dispersion modeling and hazard prediction products that represent the Federal position during actual or potential incidents involving hazardous atmospheric

releases. Through plume modeling analysis, the IMAAC provides emergency responders and decision makers with predictions of hazards associated with atmospheric releases to aid in protecting the public and the environment.

- Led by FEMA, the IMAAC is a partnership among eight Federal agencies, each with supporting capabilities and/or responsibilities for plume modeling. These agencies include: DHS/FEMA, DOE, DOD/Defense Threat Reduction Agency, National Oceanic and Atmospheric Administration, EPA, NRC, and HHS.

- The IMAAC products provide actionable information to help inform emergency response decisions. These products show hazard areas, affected populations, potential casualties and/or fatalities, damage estimates, health effects, and recommended protective action guidelines. The IMAAC also provides support for exercises. The IMAAC products are distributed through various mechanisms, to include email and the Homeland Security Information Network.

- Any Federal, state, local, tribal or territorial agency may request activation of the IMAAC for emergencies involving an atmospheric release. IMAAC assistance can be requested through the DHS/FEMA National Watch Center (NWC).



Representative dangerous fallout (DF) zones for 0.1KT, 1.0KT and 10 KT IND in which an early and direct threat from fallout radioactivity exists. A radiation *exposure rate* of 10 R/h is used to bound this zone. The DF zone will begin to shrink immediately and decrease relatively quickly over time.

6.2 Public Plume Maps

Plume maps are visual representations of the projected path of a hazardous material in the air and/or deposited on the ground. During a radiological incident, timely dissemination of plume maps through multiple communication channels, to

include social media, will:

- Support the Homeland Security Presidential Directive 5 requirement for the Secretary who "ensures that, as appropriate, information related to domestic incidents is gathered and provided to the public."
- Increase public awareness of the location of the hazardous material.
- Increase public understanding of protective action decisions.

Emergency response personnel, including public affairs responders, need to be aware of the value and limitations of plume maps. A misunderstanding of these products can lead to ineffective, inappropriate, or even detrimental actions during an incident.

International Incident Case Study: 2011 Fukushima Nuclear Crisis (2)

- *"During the first day following the tsunami and the deteriorating conditions at the Fukushima Daiichi plant, thousands of residents in the town of Namie evacuated north to Tsushima to avoid the radioactive plume. In the absence of publicly available forecasts and radioactive plume predictions from the government of Tokyo, town officials in Namie advised residents to evacuate to Tsushima based on seasonal expectations that the winter winds would be blowing south. Town officials would learn 2 months later that the winds had actually been blowing directly toward Tsushima, making it one of the areas of highest radioactive contamination."*
  Center of Biosecurity of UPMC - ***After Fukushima: Managing the Consequences of a Radiological Release*** *– Final Report March 2012*

6.3 Federal Radiological Monitoring and Assessment Center (FRMAC)

The FRMAC is an interagency organization with representatives from various Federal, state, and local radiological response organizations. The purpose of FRMAC is to assist the State, local, and tribal governments in their mission to protect the health and well-being of their citizens by coordinating all Federal environmental radiological monitoring efforts and providing:

- Verified radiation measurements
- Interpretations of radiation distributions based on EPA, FDA, or local Protective Action Guidelines
- Characterization of overall radiological conditions

International Incident Case Study: 2011 Fukushima Nuclear Crisis (con't)

- *Meanwhile, there was criticism from the media, local officials and the public over something known as SPEEDI – the System for Prediction of Environmental Emergency Dose Information. SPEEDI is a system that helps authorities model the dispersion of radioactive materials. In the early stages of the disaster, data generated by SPEEDI were not disclosed to local governments or the public. This appears to have been due to a combination of factors, ranging from differing assessments of the data's reliability to breakdowns in interagency communication. The net result was that potentially valuable dispersion information was not available to inform the evacuation process. According to both Japanese and international reports, this resulted in some people evacuating from less contaminated areas to areas that were in the path of radioactive releases. In several reports reviewing the management of the accident, Japanese officials were candid in recognizing the seriousness of the communication problems: "Especially immediately after this accident, actions were not sufficiently taken to provide local residents with information or easily understood explanations about radiation, radioactive materials, or information on future outlooks on risk factors." In addition, "although the results generated by SPEEDI are now being disclosed, disclosure should have been conducted from the initial stage."* Becker SM (2012). ***Risk communication and information in disasters and emergencies. In: Local Planning for Terror and Disaster: From Bioterrorism to Earthquakes*****,** L. Cole and N. Connell, eds., Wiley.

6.4 Protective Action Recommendations (PAR)

State, local, tribal and territorial governments are responsible for issuing and communicating protective actions to the public as they deem appropriate. EPA publishes the Protective Action Guide (PAG) manual that contains dose guidelines that would trigger public safety measures, such as evacuation or staying indoors, to minimize or prevent radiation exposure during an emergency. It also includes advice on use of pharmaceutical countermeasures, such as potassium iodide (KI), and long-term measures, such as restriction of food, temporary relocation, or permanent resettlement, to avoid or minimize exposure to residual radiation or exposure through the ingestion pathway. The Advisory Team for Environment, Food and Health (Advisory Team) is the Federal interagency group of radiation experts whose mission is to provide radiation safety recommendations to decision-makers at all levels of government following a radioactive release (not directly to the public). The Advisory Team is comprised of radiation expert representatives from FDA, CDC, EPA and USDA.

7.0 Responsibilities

7.1 DHS/FEMA

DHS and FEMA will coordinate the overall Federal incident management response for nuclear incidents. Immediate action to coordinate with other

Federal, State, and local authorities is necessary to communicate health and safety information.

- **National Incident Communications Conference Line (NICCL)**
  The NICCL is the primary interagency protocol for all departments and agencies involved in the coordinated Federal response to an IND, an RDD, or other radiological incidents. DOE, National Nuclear Security Administration (NNSA), DOD, FEMA, EPA, NASA, NORTHCOM, and other Federal external affairs personnel represent their agency on the NICCL to maintain liaison with the ESF #15 functions based on the nature of the radiological incident.

7.2 DHS Countering Weapons of Mass Destruction Office (CWMD)

Established by the Secretary of Homeland Security in December 2017, the CWMD office consolidated the Domestic Nuclear Detection Office (DNDO), a majority of the Office of Health Affairs, as well as other DHS elements.

- The CWMD integrates interagency efforts to develop nuclear detection capabilities, measures detector system performance, ensures effective response to detection alarms, advances and integrates nuclear forensics efforts, and conducts transformational research and development for advanced detection and forensics technologies. As part of the national effort to protect the nation from radiological and nuclear threats, the national office is staffed by representatives from several Federal Government agencies, and works closely with State and local organizations. CWMD retains expertise in nuclear detection and forensics operations and response, technical capabilities, and intelligence analysis. DHS Office of Public Affairs is responsible to determine what detection information is released to the media. CWMD would support DHS Public Affairs, as needed, by providing publicly releasable information regarding nuclear detection and related issues.

- CWMD is responsible for coordinating the nation's national technical nuclear forensics (NTNF) program, including planning and execution of pre-incident communications. In the immediate aftermath of a nuclear detonation the NTNF Ground Collections Task Force (GCTF), comprised of members of the Department of Justice (DOJ)/Federal Bureau of Investigation (FBI), the NTNF GCTF leader, and the Departments of Energy (DOE), and Defense (DOD), would play a crucial role by collecting vital information and evidence at the incident site. Nuclear forensic analysis and evaluation of the collected materials would support attribution efforts, along with intelligence and law enforcement information. CWMD would support DHS Public Affairs, as needed, by providing publicly releasable information on the nuclear forensics program, including the NTNF GCTF. Such information would pertain to the general aspects of the program rather than information

about the investigation itself, the release of which would be under the purview of the FBI as the lead agency for the investigation.

7.3 DOE and NNSA

DOE and NNSA facilitate the immediate and follow-on data management support for state and local decision making and public messaging efforts. The National Atmospheric Release Advisory Center (NARAC), the DOE component of the IMAAC, maps the initial spread of contamination so emergency managers can decide what protective actions are necessary. As a follow-on to the initial NARAC projections, NNSA manages the FRMAC to monitor environmental radiation and provide maps for protection of the public. (See Appendix 2 for more information on the NARAC and FRMAC.)

- DOE and NNSA public affairs may also be involved in preparing a Senior Response Official (SRO) and a Senior Energy Official (SEO) for a press conference along with the Secretary of Homeland Security following an IND/RDD.

7.4 DOJ/FBI

Under HSPD 5, the Attorney General, generally acting through the FBI, has lead responsibility for criminal investigations of terrorist acts or terrorist threats and for coordinating activities of other members of the law enforcement community to detect, prevent, preempt, investigate, and disrupt terrorist attacks against the United States.

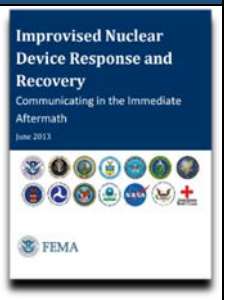
- A radiological terrorist incident may affect a single location, or multiple locations, each of which may require an incident response and a crime scene investigation simultaneously.

8.0 Federal Radiation Resource Toolkit

Nuclear Weapon Infographic

- **Integrated Public Alert and Warning System.** Depending on target location, detonation from a nuclear weapon may be 15 to 30 minutes following a missile launch. The IPAWS is designed to deliver an immediate message from the President.
- **What should I do to protect myself?**

IND Response and Recovery: Communicating in the Immediate Aftermath



Incident Type: Improvised Nuclear Device (many messages applicable to other radiological emergencies)

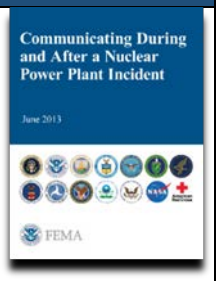
Content: Key messages for affected community and the nation

Pre-approved answers to anticipated public and media questions

Social media templates for immediate safety actions

URL: http://www.fema.gov/media-library-data/20130726-1919-25045-0892/communicating_in_the_immediate_aftermath__final_june_2013_508_ok.pdf

Communicating During and After a Nuclear Power Plant Incident



Incident Type: Nuclear Power Plant

Content: Roles and responsibilities for communicating after a nuclear power plant incident

Pre-approved answers to anticipated public and media questions

URL: http://www.fema.gov/media-library-data/20130726-1919-25045-1433/communicating_during_and_after__npp_incident___june_2013__secure_.pdf

Communicating Radiation Risks: Crisis Communications for Emergency Responders

Incident Type: Radiological Emergency (Transportation and Dirty Bomb)

Content: Guidelines for emergency message development. Example questions and answers for transportation and dirty bomb scenarios

URL: http://nepis.epa.gov/Exe/ZyPDF.cgi/500025HA.PDF?Dockey=500025HA.PDF

Other CDC Radiation Resources

Radiation Emergency Tool Kits for Public Health Professionals

- **Content**: Guidance, training, and educational materials for professionals. Fact sheets and other content that can be used for public information
  URL: http://emergency.cdc.gov/radiation/toolkits.asp

Radiation Basics Made Simple Videos

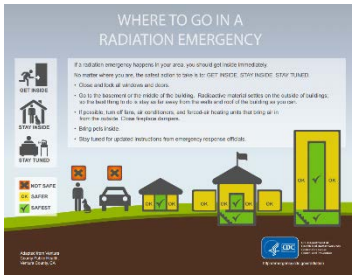
- **Content:** Eight brief educational videos on protective actions, countermeasures, and health effects, which can be used for public education or b-roll
- **URL:** http://emergency.cdc.gov/radiation/protectiveactions.asp

Radiation Communications Research Reports

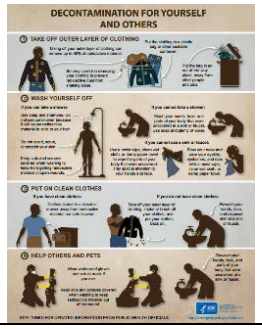
- **Content:** Formative research reports on radiation-related message testing
- **URL:** http://emergency.cdc.gov/radiation/professionals.asp

CDC Radiation Infographics

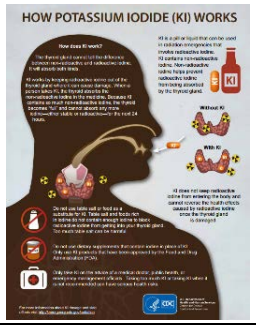
Where to go in a Radiation Emergency[2]



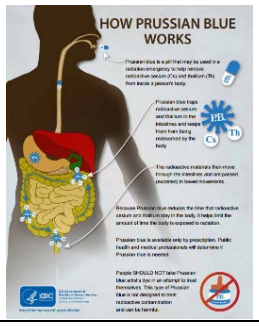
Decontamination[3]



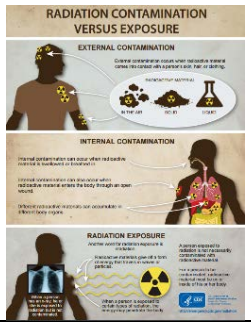
Potassium Iodide: KI[4]



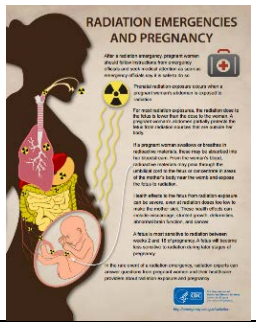
Prussian Blue[5]



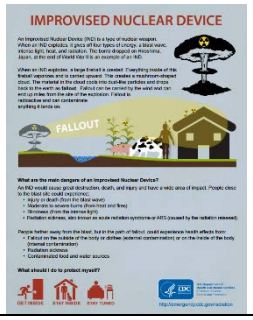
Contamination vs. Exposure[6]



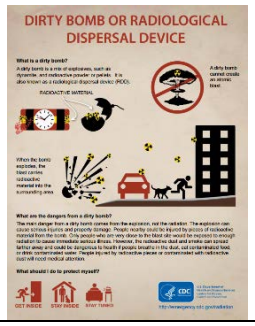
Radiation Exposure And Pregnancy[7]



Improvised Nuclear Device[8]



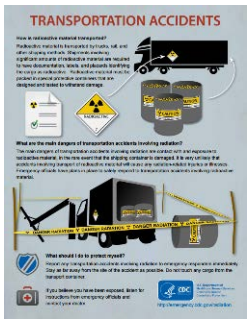
Dirty Bomb[9]



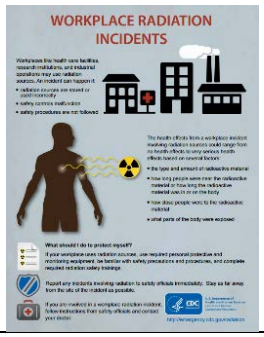
Nuclear Power Plant[10]

Radiological Exposure Device[11]

Transportation Accident[12]



Workplace Incidents[13]



1. https://emergency.cdc.gov/radiation/pdf/infographic_nuclear_weapon.pdf
2. http://emergency.cdc.gov/radiation/pdf/infographic_where_to_go.pdf
3. http://emergency.cdc.gov/radiation/pdf/infographic_decontamination.pdf
4. http://emergency.cdc.gov/radiation/pdf/infographic_ki.pdf

5. http://emergency.cdc.gov/radiation/pdf/infographic_prussian_blue.pdf
6. http://emergency.cdc.gov/radiation/pdf/infographic_contamination_versus_exposure.pdf
7. http://emergency.cdc.gov/radiation/pdf/infographic_radiation_and_pregnancy.pdf
8. http://emergency.cdc.gov/radiation/pdf/infographic_improvised_nuclear_device.pdf
9. http://emergency.cdc.gov/radiation/pdf/infographic_radiological_dispersal_device.pdf
10. http://emergency.cdc.gov/radiation/pdf/infographic_nuclear_power_plant.pdf
11. http://emergency.cdc.gov/radiation/pdf/infographic_radiological_exposure_device.pdf
12. http://emergency.cdc.gov/radiation/pdf/infographic_transportation_accidents.pdf
13. http://emergency.cdc.gov/radiation/pdf/infographic_workplace_radiation_incidents.pdf

Federal Agency Radiation Websites

HHS's Radiation Emergency Medical Management
- http://www.remm.nlm.gov/

HHS/CDC
- http://emergency.cdc.gov/radiation/

NRC
- http://www.nrc.gov/about-nrc/emerg-preparedness.html

EPA
- http://www.epa.gov/radiation
- https://www.epa.gov/radiation/pag-public-communication-resources

DOE/NNSA
- http://nnsa.energy.gov/aboutus/ourprograms/emergencyoperationscounterterrorism

FEMA
- http://www.ready.gov/

Substance Abuse and Mental Health Services Administration Disaster Distress Helpline
- http://www.samhsa.gov/find-help/disaster-distress-helpline

Additional Resources

National Alliance for Radiation Readiness
- http://www.radiationready.org/

Conference of Radiation Control Program Directors
- http://crcpd.org/

National Council on Radiation Protection and Measurement
- http://ncrponline.org/

International Commission on Radiological Protection
- http://www.icrp.org/

Health Physics Society
- http://hps.org/publicinformation/ate/find.cfm

RadResponder Network
- http://www.RadResponder.Net

9.0 Sample Nuclear Detonation/Improvised Nuclear Device Social Media Messages

BLUE - Replace with specific text

YELLOW - Infographic needed

(###) denotes character count of message. Does not include text in yellow

IPAWS Compatible messages fit the 90-character guideline for IPAWS, but can be used on other social media platforms if desired.

Immediate Notification/Nuclear Attack Warning
IPAWS Compatible: People in LOCATION: BALLISTIC MISSILE ALERT-Get inside, stay inside, stay tuned for info (88) If you are near LOCATION: get inside a basement or central room of any nearby building, away from windows and doors, stay inside, stay tuned for more information. CDC WHERE TO GO GRAPHIC (162) If you are in a car, seek shelter in the nearest building. If no buildings nearby, pull to the side of the road, under an overpass if possible. (143) In the event of a bright flash of light, duck down for at least 30 seconds to avoid injury from flying debris. (110) If you are near LOCATION: get inside a basement or central room of any nearby building, stay inside, stay tuned for more information. Do not leave your shelter unless officials provide other instructions or your shelter is threatened by fire or collapse. CDC WHERE TO GO GRAPHIC (254)
Immediate Safety Messages
IPAWS Compatible: Get inside, stay inside, stay tuned. This instruction can save your life. (74) People in LOCATION: a NUCLEAR EVENT has occurred. To protect yourself and your family: get inside, stay inside, stay tuned for more information. Follow instructions from officials-this can save your life. CDC WHERE TO GO GRAPHIC (206) If you are near LOCATION: get inside a basement or central room of any nearby building, stay inside, stay tuned for more information. Do not leave your shelter unless officials provide other instructions or your shelter is threatened by fire or collapse. CDC WHERE TO GO GRAPHIC (254) People in LOCATION: a NUCLEAR EVENT has occurred. Get inside a basement or central room of any nearby building, stay inside, and stay tuned. Check @HANDLE @HANDLE

@HANDLE for updates. (182)

If you are in a car in LOCATION: Quickly drive to the nearest substantial building and get inside. Pull over and seek shelter as soon as possible. (147)

Do not attempt evacuation UNLESS an official tells you to do so, or your shelter is threatened by fire or collapse. Get inside, stay inside, stay tuned. CDC WHERE TO GO GRAPHIC (152)

Cover your nose and mouth with a mask or cloth until you get inside. This will reduce your chance of breathing in dangerous materials. (134)

If you are near LOCATION: Stay inside for 24 hours or until local authorities provide other instructions. The highest radiation levels from fallout decrease significantly after 24 hours. (188)

Stay tuned. As conditions change, updates will be provided regularly. Check @HANDLE @ HANDLE @HANDLE for updates. (113)

If you are in areas surrounding LOCATION: stay away from LOCATION to make it easier for emergency responders to get to those in need. (133)

Decontamination

IPAWS Compatible: Remove radioactive material: Gently wash with soap. It's ok to use tap water. (78)

IPAWS Compatible: Take off outer clothing and store in bag if possible. If not, brush off dust and redress. (90)

Get Clean. To remove contamination: change clothes or remove an outer layer. Gently wash hair, hands, face, and exposed skin with soap/water or wipes. This can remove up to 90% of contamination. The most hazardous radioactive particles are about the size of fine sand. CDC DECONTAMINATION GRAPHIC (268)

Simply removing your outer layer of clothing and washing or wiping exposed skin removes up to 90% of radioactive particles. Wash your hands with soap and water regularly to reduce contamination. (188)

Put the clothing you take off in a sealed bag and store it away from you and your family to keep the radioactive material from contaminating anything else. CDC DECONTAMINATION GRAPHIC (155)

Decontaminate pets: brush their coat to remove radioactive dust, then gently wash with water and soap. CDC DECONTAMINATION GRAPHIC (102)

Clean eyeglasses: Wash with soap and water to remove radioactive contamination. You can continue to wear your glasses after you wash them. (138)

Clean prosthetic limbs: To remove radioactive contamination, wash the entire prosthesis thoroughly with soap, then dry. (120)

Clean walkers, crutches, non-electric wheelchairs, and canes by thoroughly washing each item to remove radioactive contamination. (129)

Water Guidance

Radioactive contamination in tap water is unlikely in the immediate aftermath of a large-scale nuclear event. However, other chemical or biological contamination (from broken infrastructure) could still be a concern. These are all-hazards messages for drinking water.

IPAWS Compatible: People in LOCATION: Stay hydrated. Bottled/sealed drinks are best. Wash containers first. (78)

Only use if dehydration concerns are high AND messaging aligns with local guidance: People in LOCATION: Stay hydrated. Bottled water or sealed beverages are best. If that is not available, then tap water can be used to stay hydrated. (143)

You can use tap water or well water to clean yourself and your food. The risk from having radioactive material on your body or consuming radioactive material on your food is significantly reduced by washing. (207)

Food

Do not eat food from your garden if you are near LOCATION. Do not fish or hunt in LOCATION until further notice. (112)

Packaged food and drinks are safe to consume, but wash or wipe off the packaging first. Food items that were inside a building are also safe to eat – do not consume food or liquid that was outdoors, as it may be contaminated. (226)

Sealed pet food is also free from radioactive contamination and should be fine to give to your pets. (100)

First Aid/Medical Needs

Treat cuts, bruises, or other minor injuries with standard first aid. Other than washing, these do not need specialized treatment. (131)

Call 911 for a life-threatening emergency. If a call doesn't work, seek help from a neighbor. Go to the hospital only as a last resort. (135)

Do not go to the hospital unless you are in critical need. Hospitals should be kept clear for victims in in need of life-saving treatment. (139)

If you evacuated and develop severe nausea, vomiting, or diarrhea and were within # miles of LOCATION at the time of the detonation, seek medical attention. If you are told to stay inside, only leave your shelter if medical conditions are immediately life threatening. (267)

Showing some signs and symptoms, like minor nausea, vomiting, or diarrhea does not mean you have radiation sickness, but you should be seen by a doctor when it is safe to do so. (177)

Family & Children Concerns

Stay where you are! Going outside to get loved ones could expose you and them to dangerous levels of radiation. (111)

Children and adults in schools, daycares, hospitals, nursing homes, or other places will be instructed to stay inside until emergency responders know that it is safe to evacuate. (179)

Schools, daycares, hospitals, nursing homes, and other places have emergency plans in place to keep people safe at the facility. (128)

Use text messages, email, and social media to reach your loved ones. Phone lines may be damaged or overloaded. (113)

Potassium Iodide

Never take potassium iodide (KI) unless you have specifically been advised to do so by a public health official. It is only useful in specific situations, and could cause harm if you take it without instruction. CDC POTASSIUM IODIDE GRAPHIC (211)

Potassium iodide (KI) will not protect you from radiation poisoning. KI only protects your thyroid from radioactive iodine if taken before exposure. Only take it if directed to do so by a public health official. CDC POTASSIUM IODIDE GRAPHIC (212)

Do not use common household items and over-the-counter medications containing iodine as a substitute for potassium iodide (KI). They will not protect your thyroid from radiation. (179)

Air Quality and Safety

If possible, close doors and windows. If dust or smoke is in the air, cover your nose and mouth with a mask or cloth. This will reduce your chance of breathing in dangerous materials. (184)

Evacuation

If you are in LOCATION: Change shelter location immediately in case of fire, threat of building collapse, or any life-threatening hazard. (138)

People in LOCATION will be evacuated when official radiation experts confirm it is safe to leave. Stay tuned. (109)

If you are asked to evacuate, stay calm and follow instructions. The instructions are for your safety, and will get you to needed services the fastest way. (156)

Radiation testing centers will be set up around LOCATION, which will check people for radiation contamination and assist with other services. (141)

Plume Maps & Fallout

Weather predictions indicate areas DIRECTION of LOCATION will have hazardous radioactive fallout. Listen to local officials for safety instructions. (149)

People DIRECTION of LOCATION: weather predictions indicate fallout may arrive in your area soon. Stay inside unless officials instruct otherwise. (145)

The highest radiation levels from fallout decrease significantly after 24 hours. Stay inside for 24 hours or until local authorities provide other instructions. (188)

Radioactive fallout will settle out of the air onto buildings, cars, and the ground. This fallout can still expose you and your family to radiation--stay inside for at least 24 hours or until an official tells you otherwise. (224)

Maps are being developed to show locations where radioactive material is going. You can view current maps here: WEBSITE LINK (124)

Appendices

1 U.S. Nuclear Regulatory Commission
2 Department of Energy/National Nuclear Security Administration
3 Department of Defense
4 National Aeronautics and Space Administration
5 Environmental Protection Agency

References:

A. Homeland Security Presidential Directive (HSPD) 5
B. National Response Framework (NRF)
C. National Incident Management System (NIMS)
D. Nuclear/Radiological Incident Annex to the Response and Recovery Federal Interagency Operational Plans (NRIA)
E. DOD 3150.8-M, Nuclear Weapon Accident Response Procedures (NARP) Manual D

***** THE ABOVE APPENDICES ARE ONLINE IN THE EMERGENCY SUPPORT FUNCTION 15 SOP (JULY 2016) *****